REMARKS/ARGUMENTS

Claims 14-16, 20-21 and 24 have been amended herein. Claims 1-13 have been previously cancelled. Thus, claims 14-33 are currently pending in this application and are at issue herein.

§ 103 Claim Rejections

Claims 14-33 stand rejected under § 103(a) as obvious over U.S. Patent No. 6,122,505 to Genell et al. ("Genell") in view of U.S. Patent No. 7,002,948 to Kato ("Kato"). Applicant respectfully traverses the claim rejections for at least the following reasons.

Burden Of Proving Obviousness Under § 103

"**All words in a claim must be considered in judging the patentability of that claim against the prior art**." MPEP § 2143.03 (*emphasis added*). "When evaluating claims for obviousness under 35 U.S.C. 103, **all the limitations of the claims must be considered and given weight**." MPEP § 2143.03 (*emphasis added*). "If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious." Id. "A 35 U.S.C. 103 rejection is based on 35 U.S.C. 102(a), 102(b), 102(e), etc. depending on the type of prior art reference used and its publication or issue date." MPEP § 2141.01.

To establish a *prima facie* case of obviousness, an Examiner must show that an invention would have been obvious to a person of ordinary skill in the art at the time of the invention. MPEP § 2141. "Obviousness is a question of law based on underlying factual inquiries." Id. The factual inquiries enunciated by the Court include "ascertaining the differences between the claimed invention and the prior art" and "resolving the level of ordinary skill in the pertinent art."

MPEP § 2141.

"A statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references." MPEP § 2143.01. "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead**, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.**" KSR International Co. v. Teleflex Inc., 550 U.S.398, 419, 82 USPQ2d, 1385, 1396) (*citing* In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (*emphasis added*)); MPEP § 2143.01.

For instance, an invention that permits the omission of necessary features and a retention of their function is an indicia of nonobviousness. In re Edge, 359 F.2d 896, 149 USPQ 556 (CCPA 1966); MPEP § 2144.04. A conclusory statement to the contrary is insufficient to rebut such an indicia of nonobviousness. *See* MPEP § 2143.01.

Moreover, "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious." MPEP § 2143.01. Also, "the proposed modification cannot render the prior art unsatisfactory for its intended purpose." MPEP § 2143.01.

Claims 14-33

Claims 14-33 are not obvious over Genell in view of Kato. The underlying object of the present invention is an automated and cost-effective method and arrangement for detecting a radio coverage of a multicellular mobile radio system. Through such detection, a map of the radio coverage may be created. In accordance with the inventive method and arrangement, all base stations within the radio coverage area remain in the normal operating mode, except one. This one base station is switched to a measuring operating mode to perform measurements on the quality of the RF signals received from each of the base stations locally adjacent to it, as well as to measure a quality of synchronicity between it and each of the locally adjacent base stations. The measurements are taken while all of the other base stations, except the one base station switched to the measuring operating mode, remain in the normal operating mode. The results of the measurements are sent to an evaluation unit, which performs evaluations on the measured data and may modify the mobile radio system based on the results of the evaluation.

In accordance with the present invention, all base stations are consecutively switched into the measuring operating mode, with the remaining base stations remaining in the normal operating mode. As a result of such consecutive switching, a complete map of the radio coverage area can be generated. Also, as a result of the consecutive switching, the availability of the overall system predominantly remains, and the only limitation placed on the system is due to the one switched base station performing the measurements. Additionally, a base station may be able to perform in both the normal operating mode and measuring operating mode in parallel, thus further increasing the availability of the overall system. Based on the created map of RF

coverage by the evaluation unit, the transmit power of one or more base stations may be adjusted to optimize performance.

Independent claim 14, as amended, recites, *inter alia*:

> ***consecutively switching the plurality of base stations, one at a time, from the normal operating mode to a measuring mode;***
>
> ***measuring, by the one switched base station in the measuring operating mode, a field strength of each of the base stations locally adjacent to the one switched base station, with the locally adjacent base stations in the normal operating mode;***
>
> ***measuring, by the one switched base station in the measuring operating mode, a quality of synchronicity between the one switched base station and each of the locally adjacent base stations, with the locally adjacent base stations in the normal operating mode;***
>
> ***sending each measured field strength and measure of synchronicity quality to the evaluation unit.***

Similarly, independent claim 24, as amended, recites, *inter alia*:

> ***a plurality of base stations communicatively connected to the evaluation unit, the plurality of base stations operating in a normal operating mode,***
>
> ***wherein the plurality of base stations are consecutively switched, one at a time, from the normal operating mode to a measuring operating mode,***
>
> ***wherein the one switched base station in the measuring operating mode measures (a) a field strength of each of the base stations locally adjacent to it, with the locally adjacent base***

> ***stations in the normal operating mode; and (b) a quality of synchronicity between the one switched base station and each of the locally adjacent base stations, with the locally adjacent base stations in the normal operating mode, and***
>
> ***wherein the evaluation unit receives the measured field strength and measure of synchronicity quality for evaluation.***

Neither Genell nor Kato, taken alone or in combination disclose or suggest the above-identified limitations.

Genell discloses the testing of base stations by placing a base station into a test mode to receive test signals from a tested base station and to send test signals to the tested base station. In other words, the base station operating in the test mode behaves like a mobile device to verify the proper operation of one other base station. Both the testing and the tested base stations of Genell report the results of their measurements to the central controller. For example, col. 4, lns. 51-62 of Genell state:

> For testing the receive path, a tested BTS, operating in the normal operating mode, receives test signals transmitted from a testing BTS 20, preferably, a neighboring BTS 20, over an uplink RF channel. The tested BTS 20 then reports the results of its reception to the BCS 16. For testing the transmitter path, the tested BTS 20 transmits test signals to the testing BTS 20 over a downlink RF channel, with the testing base station reporting its reception results to the BCS 16. The BCS 16 then routes the test results to the MSC 14 for further processing, which may include comparisons with various test thresholds.

Additionally, the measurement and report of signal parameters is disclosed generally in Genell (*see* Genell, col. 3, lns. 1-19), and Genell is silent as to the nature of the parameters. In

fact, information regarding the signal parameters is implicitly given in a questionable manner. (*see* Genell, col. 5, lns. 39-67).

The purpose of Genell is to test both the transmitter and receiver paths of a base station. (*see* Genell, Abstract; col. 2, lns. 16-33; col. 2, lns. 47-57; col. 4, lns. 62-65). Genell further discloses the use of "test signals" to test the transmitter and receiver paths, with the test signals transmitted at a special power level and modulated with a pre-defined bit sequence to provide accurate measurements of quality parameters. (*see* Genell, col. 6, lns. 38-42). In order to provide proper testing in Genell, a pair of base stations are required, *i.e.*, a testing base station and a tested base station. Thus, test commands must be issued to at leas two base stations in order for proper measurement to be taken and reported.

Kato discloses a method of how to synchronize base stations. In order to work properly, it is essential with a DECT multicellular radio system to keep all base stations synchronized. Kato includes no disclosure or suggestion of measuring field strength and/or quality of synchronicity between base stations in a radio coverage area.

In contrast to both Genell and Kato, the presently claimed invention requires consecutive switching of the plurality of base stations, one at a time, from the normal operating mode to a measuring operating mode. The remaining base stations remain in the normal operating mode. The one switched base station measures the field strength of each of the base stations locally adjacent to it, and also a quality of synchronicity between it and each of the locally adjacent base stations. The measured field strength and measure of synchronicity quality is sent to an evaluation unit for evaluation. The evaluation unit can then generate a map of RF signal

coverage and, if necessary, adjust the transmit power of the base stations as a result of the evaluation of RF coverage.

Neither Genell nor Kato, taken alone or in combination, disclose or suggest these limitations.

Accordingly, for at least the reasons identified above, independent claims 14 and 24 are believed allowable over the prior art.

Claims 15-23 and 25-33 depend cognately from independent claims 14 and 24, respectively, and add features which further remove the present invention from the prior art. Given at least the distinctions identified above with respect to independent claims 14 and 24, dependent claims 15-23 and 25-33 are believed allowable over the prior art and a separate discussion of them will not be belabored for the sake of brevity.

Conclusion

For at least the above-identified reasons, claims 14-33 are believed allowable over the prior art. Allowance and passage to issue are respectfully requested. Early notification to that effect is respectfully requested.

It is believed that this Response requires a two-month extension of time. Accordingly, a petition for a two-month extension of time, which also authorizes payment of the fee to be charged to our firm's credit card, is submitted herewith. If additional fees are required for any reason, the Commissioner is hereby authorized to charge Deposit Account 02-4800 the necessary amount.

Should any issues remain, the Examiner is invited to contact the undersigned at the number listed below to advance prosecution of the case. The Examiner is respectfully requested to direct further communications in this case to the attention of the undersigned.

Respectfully submitted,

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